

**REMARKS**

Reconsideration of this application, as amended, is respectfully requested. The following remarks are responsive to the Office Action mailed January 20, 2004.

**Double Patenting**

Claims 15-31 are provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 21-40 of copending Application No. 09/023170 and claims 18-30 of copending Application No. 09/023234. Therefore, a terminal disclaimer regarding claims 15-31, as presently amended, is filed herewith.

**Claim Rejections**

Claims 15-18, 20, 21, 26, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,045,781 (hereinafter "Levy").

Claim 15 as presently amended to more clearly claim that the memory module controller serves as a **direct** interface to the system memory controller. Levy, on the other hand, teaches using an associative memory between the memory management unit and the memory control and timing/memory tranceiver units (figure 1). Indeed, Levy teaches a data processing system that provides for overlapping data transfers without the need for multiple control pins (Col. 3, Lns. 57-61) using an associative memory to control asynchronous transfers from or to a location in other down-stream memory modules (Col. 4, Lns. 20-25).

Although the added limitation of a "direct" interface is intended to more clearly point out one aspect of Applicant's invention, it is not added to merely avoid the

teachings of Levy. Applicant asserts that Levy does not teach interfacing a system memory controller to a memory management unit, but rather teaches using an intermediate associative memory to interface a memory management unit to the memory control and timing/memory transceiver combination. Furthermore, Applicant does not, in adding the limitation to claim 15 mentioned above, intend to limit the invention from using other interface logic coupled to the memory module controller unit to facilitate the communication between the system memory controller and the memory module controller.

Accordingly, it is respectfully asserted by Applicant that neither presently-amended claim 15, nor any dependent claims of claim 15, are anticipated by Levy and is in condition for allowance.

Claims 19, 22-25, 27, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,045,781 to Levy et al.

In view of the above amendments and arguments regarding claim 15, it is asserted by Applicant that limitations within claims 19, 22-25, 27 and 31 are not taught or suggested by Levy, and are therefore not obvious in view of Levy. Accordingly, Applicant respectfully asserts that claims 19, 22-25, 27 and 31 are in condition for allowance.

Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,045,781 to Levy et al. in view of U.S. Patent 5,257,233 to Schaefer. In view of the above amendments and arguments regarding claim 15, it is asserted by Applicant that limitations within claims 19, 22-25, 27 and 31 are not taught or suggested by Levy nor Schaefer, and are therefore not unpatentable over Levy in view of

Schaefer. Accordingly, Applicant respectfully asserts that claims 19, 22-25, 27 and 31 are in condition for allowance.

Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,045,781 to Levy et al. in view of U.S. Patent 5,036,493 to Nielsen. In view of the above amendments and arguments regarding claim 15, it is asserted by Applicant that limitations within claims 19, 22-25, 27 and 31 are not taught or suggested by Levy nor Nielsen, and are therefore not unpatentable over Levy in view of Nielsen. Accordingly, Applicant respectfully asserts that claims 19, 22-25, 27 and 31 are in condition for allowance.

If there are any fees due, please charge them to our Deposit Account No. 02-2666.

Respectfully submitted,

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